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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 10

Application Number: 09/881,361
Filing Date: June 13, 2001
Appellant(s): HOFFMAN ET AL.

Mr. James R. Brueggemann
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11 April 2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because claim 1 was not included in any of the remarks. It is believed that it was mistakenly left out of issue (A).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,220,336	Kochevar	9-1980
4,667,963	Yoneyama	5-1987
5,348,302	Sasamoto	9-1994
5,452,890	Bingman	9-1995
5,888,148	Allen	3-1999

JP 09-248355 "Golf Club" (Sep. 22, 1997) solution.

WO 00/62873 "Improved Golf Club" (Oct 26, 2000) page 8, lines 14-15, page 12, lines 9-11, figures 2, 3A, and 5A.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-4, 6, 8-9, 11, and 15 stand rejected and claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-248355 in view of Kochevar (4,220,336) and WO 00/62873.

JP 9-248355 discloses a hosel plug being cylindrical in the form of fitting in a hole which has a diameter, a shaft secured to the hosel cavity at a location above the hosel plug, a plurality of plugs each having the same size and shape but different weights, and plug weights in the range of (.5-3) grams (Solution).

JP 9-248355 lacks a plug having a metallic powder, a compliant polymeric material compression fitted into the hosel cavity by slight compression without a need of deforming a plug from its substantial shape, and different plug weights based on the amount of powder mixed into the plug material. Kochevar discloses a weight slug placed inside a shaft formed of a polymeric material in the form of polyisobutylene which is compliant in that it can be

compressively loaded (abstract, Col. 2, Lns. 59-67) and is deformable (Col. 5, Lns. 44-50) without a need to deform a plug from a substantial shape (Figs. 2, 6-9), a powdered metal (Col. 5, Lns. 36-50), and varying the proportions of the materials to achieve desire results (Col. 5, Lns. 67 through Col. 6, Ln. 2). WO 00/62873 discloses a deformable insert being placed inside a shaft being a polymer material (Page 8 Lns. 14-15) and compression fitting into a shaft (Page 12 Lns. 9-11) by slight compression without a need of deforming a plug from its substantial shape (Figs. 2, 3A, and 5A). In view of the patent of Kochevar it would have been obvious to modify the club of JP 9-248355 to have a plug being a deformable binder with a metal powder in order to simplify the assembly process by deforming the shape to fit a cavity instead of requiring more precise dimensions to ensure proper fitting. In addition, in view of the patent of Kochevar it would have been obvious to modify the club of JP 9-248355 to have different plug weights based on the amount of powder mixed into the plug material in order to provide a variety of weights from which a golfer would choose from to adjust a clubs swing weight. In view of the document WO 00/62873 it would have been obvious to modify the club of JP 9-248355 to have a binder being a compliant polymeric material compression fitted into the hosel cavity by slight compression without a need of deforming a plug from its substantial shape in order to have a plug which returns to the original form when a stress is removed so that the plug is more easily handled and stored without deteriorating, in order to have a clean method of fixing a plug to a cavity without the use of an adhesive, and in order to be able to temporarily fix a plug to a cavity.

3. Claims 2 and 13-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-248355 in view of Kochevar (4,220,336) and WO 00/62873 as applied to claims 1, 3-4, 6, 8-9, 11, 15 and 17-18 above, and further in view of Yoneyama and Sasamoto.

JP 9-248355 lacks a metallic powder being tungsten, a polymeric material being nylon, and tungsten having a weight percentage in the range of 0-96 %. Kochevar discloses a metal lead metal powder added to a plug with a weight percentage of 90 % (Col. 5, Lns. 60-65). Yoneyama discloses a metallic powder added to a head weighting member being lead or tungsten (Col. 3, Lns. 28-40). In view of the patent of Kochevar and Yoneyama it would have been obvious to modify the plug of JP 9-248355 to have a metallic powder being tungsten in a weight percentage of 90 % and varied from that amount to achieve different weighted plugs in order to add more weight for the same volume of powder added to a plug compared to lead. Sasamoto discloses a weighting member being made of a binder and metal powder with the binder being nylon (Col. 3, Lns. 58-68). In view of the patent of Sasamoto it would have been obvious to modify the club of JP 9-248355 to have a polymeric material being nylon in order to utilize a polymeric material available in the market place and to utilize the characteristics of nylon.

4. Claims 5 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-248355 in view of Kochevar (4,220,336) and WO 00/62873 as applied to claims 1, 3-4, 6, 8-9, 11, 15, and 171-8 above, and further in view of Bingman.

JP 9-248355 lacks a hosel's lower cylindrical cavity having a diameter of about 8.5 mm and a length of 10 mm, a hosel's upper cylindrical cavity having a diameter of about 9 mm and

a length of 25 mm. Bingman discloses a cylindrical cavity (32) for a shaft being 9 mm (Col. 4, Lns. 53-58) and an axial length of an upper section (36) of a cylindrical cavity being 10 millimeters (Col. 4, Lns. 49-54) with an addition hosel depth below the upper section (Ref. No. 32, Fig. 3). Clearly with that addition of the lower hosel bore (32) the total hosel length would be over 20 mm. An artisan skilled in the art of designing a hosel enough surface are to form a secure attachment to a shaft would have selected a suitable length bore for a hosel in which 25 millimeters is included. In addition, an artisan skilled in the art of forming a lower hole for a weight plug smaller in diameter than a hosel hole which fits a shaft would have selected a suitable diameter and depth of a hole to prevent the shaft from entering and to add sufficient weight in which a hole of 8.5 mm in diameter and 10 mm in depth is included.

In view of the patent of Bingman it would have been obvious to modify the club of JP 9-248355 to have a hosel's upper cylindrical cavity having a diameter of about 9 mm in order to fit a shaft having a tip diameter of 9 mm. In addition, it would have been obvious to modify the club of JP 9-248355 to have a cavity length of 25 mm in order to have sufficient surface area to attach a tip end of a shaft to a head.

It would have been obvious to modify the club of JP 9-248355 to have a hosel's lower cylindrical cavity having a diameter of about 8.5 mm in order to prevent a shaft having a diameter of 9 mm from placing stress on a plug and to have a cavity length of 10 mm in order to have sufficient volume to add a sufficient amount of weight to a club to affect the swing weight.

5. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-248355 in view of Kochevar (4,220,336) and WO 00/62873 as applied to claims 1, 3-4, 6, 8-9, 11, 15, and 17-18 above, and further in view of Allen.

JP 9-248355 discloses a plug having a weight of .5-3.0 grams (Solution).

JP 9-248355 lacks a plug constituting (.25 -3.25) % of the heads total weight. Allen discloses a head total weight being in a range of 190-205 grams. In view of the patent of Allen it would have been obvious to modify the club of JP 9-248355 to have a total head weight of 190- 205 grams in order to transfer energy to a ball at impact. As such the plug would constitute (.25 -3.25) % of the heads total weight.

6. Claim 16 stands rejected and claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-248355 in view of Kochevar (4,220,336), WO 00/62873, Yoneyama, Sasamoto and Allen.

See paragraphs above for elements of structure previously rejected by JP 9-248355 in view of Kochevar, WO 00/62873, Yoneyama, Sasamoto and Allen.

Response to Arguments

7. The argument that it is improper to combine the references of JB '355, Kochevar, and WO '873 due to there being no motivation is disagreed with. JB '355, Kochevar, and WO '873 all disclose teaching of adding plugs to a lower part of a golf club. Clearly the teachings of each of them can be used to attaching plugs to a cavity in a hosel. The argument that it is

improper to use the reference of WO '873 since WO '873 does not disclose a polymer with metallic powder to weight a club is disagreed with. Kochevar was used to show the teaching of adding metallic powder to a binder to weight a club. WO '873 was used to show a suitable binder which is used for plugs attached to a lower end of a club. The argument that it is improper to use the reference of Kochevar since Kochevar discloses a putty-like consistency is disagreed with. Kochevar was used to only show that it is known to add metallic powder to weight plugs. JB '355, Kochevar, and WO '873 all show the three different material forms of plugs which are non-deformable solid, viscous (putty-like) and a deformable material which returns to its shape (non-viscous). Kochevar and JB '355 disclose different ways to weight plugs. Kochevar and WO '873 show different binders. The argument that it is improper to combine the references of WO '873 and Kochevar since it would cause it to lose its putty like consistency is disagreed with. Kochevar and WO '873 were used to show different binders. The deformable non-putty-like binder of WO '873 is a suitable substitute of the deformable binder of Kochevar. The Non-viscous material of WO '873 is non-viscous as is the material of JB '355. The argument that it is improper to use the reference of Billings since Billings did not disclose adding a weight within a bore is disagreed with. Billings was not used for this but to show a known hosel bore diameter and hosel bore depth. JB '355 was used to show the teaching of adding weight within a bore. The same response is applied to the argument towards Allen. Allen was not used to show the teaching of adding a weight within a bore but JB '355 was used to show this teaching.

(11) Response to Argument

Applicant argues:

1. It is improper to combine to references of JP '355 in view of Kochevar and WO '873 because the examiner failed to show motivation of one to make a plug comprising a mixture of powdered metal and a compliant polymeric material without the benefit of the present invention.

2. It is improper to modify the reference of Kochevar to have the plug with a binder being a compliant polymeric material since adding this type of binder would lose the putty-like consistency taught by Kochevar.

3. It is improper to use the reference of WO '873 since WO '873 does not suggest a polymeric material as a binder to suspend another material as a metallic powder.

4. It is improper to use the references of Yoneyama and Sasamoto since they fail to address a hosel plug comprised of a mixture of a metallic powder and a compliant polymeric material secured in place by compression of the compliant polymeric material.

5. It is improper to use the reference of Bingman since Bingman fails to address a hosel plug comprised of a mixture of a metallic powder and a compliant polymeric material secured in place by compression of the compliant polymeric material.

6. It is improper to use the reference of Allen since Allen fails to address the short comings of JP '355, Kochevar and WO '873.

7. It is improper to combine the six references of JP '355, Kochevar, WO '873, Yoneyama, Sasamoto, Bingman and Allen since there is no motivation to arrive at a club as claimed in claim 1 or claim 16.

8. It is improper to rely on WO '873 and Kochevar for such a limited purpose.

Examiner's response:

9. With respect to items 1, the argument that it is improper to combine to references of JP '355 in view of Kochevar and WO '873 because the examiner failed to show motivation of one to make a plug comprising a mixture of powdered metal and a compliant polymeric material without the benefit of the present invention is disagree with. Kochevar discloses a powdered metal in the form of lead (Col. 5, Lns. 60-65) and a binder containing a polymeric material in the form of polyisobutylene (Col. 5, Lns. 60-65) which is compliant in that it can be compressively loaded (abstract, Col. 2, Lns. 59-67) and is deformable (Col. 5, Lns. 44-50) without a need to deform a plug from a substantial shape (Figs. 2, 6-9). The reference of WO '873 also showed a polymeric material used as an insert and even containing a weight. This reference of WO '873 is an accumulative reference of what is known in the art and has been kept in the rejection for completeness though it was not really needed.

10. With respect to item 2, the argument that it is improper to modify the reference of Kochevar to have the plug with a binder being a compliant polymeric material since adding this type of binder would lose the putty-like consistency taught by Kochevar is disagreed with. Kochevar had a compliant polymeric material as a binder in the form of polyisobutylene (Col. 5, Lns. 60-65) and it has a putty-like consistency (abstract).

11. With respect to item 3, the argument that it is improper to use the reference of WO '873 since WO '873 does not suggest a polymeric material as a binder to suspend another material as a metallic powder is disagreed with. WO '873 discloses a polymeric material suspending a sold metal core (Page 4, Lns. 21-32). Kochevar discloses a binder being a polymeric material suspending a metallic powder. WO '873 is an accumulative reference of what is known in the art and has been kept in the rejection for completeness though it was not really needed.

12. With respect to item 4, the argument that it is improper to use the references of Yoneyama and Sasamoto since they fail to address a hosel plug comprised of a mixture of a metallic powder and a compliant polymeric material secured in place by compression of the compliant polymeric material is disagreed with. Yoneyama and Sasamoto were not used to show this feature but Kochevar and WO '873 were. However WO '873 was not really needed. Kochevar discloses a powdered metal in the form of lead (Col. 5, Lns. 60-65) and a binder containing a polymeric material in the form of polyisobutylene (Col. 5, Lns. 60-65) which is compliant in that it can be compressively loaded (abstract, Col. 2, Lns. 59-67) and is

deformable (Col. 5, Lns. 44-50) without a need to deform a plug from a substantial shape (Figs. 2, 6-9). Cleary it would have been an obvious and suitable selection for a plug for the head of JP '355. Yoneyama was used to show that it is known to replace tungsten powder with lead powder for a golf head piece. Sasamoto was used to show another type of mixture of a polymeric material in the form of nylon and metal powders used in golf head pieces.

13. With respect to item 5, the argument that it is improper to use the reference of Bingman since Bingman fails to address a hosel plug comprised of a mixture of a metallic powder and a compliant polymeric material secured in place by compression of the compliant polymeric material is disagreed with. See paragraph 9 above.

14. With respect to item 6, the argument that it is improper to use the reference of Allen since Allen fails to address the short comings of JP '355, Kochevar and WO '873 is disagreed with. See paragraph 9 above.

15. With respect to item 7, the argument that it is improper to combine the six references of JP '355, Kochevar, WO '873, Yoneyama, Sasamoto, Bingman and Allen since there is no motivation to arrive at a club as claimed in claim 1 or claim 16 is disagreed with. With respect to claim 1 see paragraph 9 above. With respect to claim 16, the number of references are not important as long as there is motivation to make the modification. The examiner provided motivation to make the modifications in each instance a reference was used.

16. With respect to item 8, the argument that it is improper to rely on WO '873 and Kochevar for such a limited purpose is disagreed with. See paragraph 9 above.

17. Kochevar, WO '873 and Sasamoto all disclose that it is known to use a polymeric material containing a weight to add weight to a specific location on a golf club. The polymeric material and weight as defined in the claims have all been used in the art and as such are suitable selections when weighting golf clubs.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Stephen Blau

May 18, 2003

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